RU-721
Rec'd 10/4/91

PEREGRINE FALCON SURVEYS IN INTERIOR AND NORTHERN ALASKA, 1990

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December, 1990

INTRODUCTION

Three subspecies of Peregrine Falcon (*Falco peregrinus*) occur in Alaska: Arctic Peregrine Falcons (F. *p. tundrius*) inhabit the northern tundra regions of the state; American Peregrine Falcons (F'. *p. anatum*) occur in the forested interior; and Peale's Peregrine Falcons (F. *p. pealei*) occur in the coastal regions of the Aleutian Islands, Gulf of Alaska, and southeast Alaska. Both the Arctic and American subspecies are highly migratory, wintering as far south as Brazil and Argentina. The Peale's Peregrine Falcon is for the most part considered non-migratory.

Beginning in the late 1940s, the use of persistent organochlorine pesticides greatly affected Arctic and American Peregrine Falcons in Alaska. These pesticides caused birds to lay thinned-shelled eggs that often failed to hatch and consequently lowered reproduction. Both subspecies were classified as "endangered" in 1973 under the Endangered Species Act. In Alaska, local populations declined to approximately 30 percent of historical levels by the mid-1970s. In 1972, the United States restricted the use of persistent organochlorine pesticides, and local populations in Alaska began to increase in 1978 and have continued to do so. Arctic Peregrine Falcons are currently listed as "threatened" and American Peregrine Falcons are listed as "endangered."

The Peregrine Falcon Recovery Plan, Alaska Population identified four representative study areas for the two listed subspecies in Alaska. These were the upper Yukon and upper Tanana rivers in the interior and the Colville and Sagavanirktok rivers in northern Alaska. These areas were selected for study because of the historical data available for each area. In 1979, the Fish and Wildlife Service initiated a survey and banding program for Arctic and American Peregrine Falcons in Alaska in these areas. Objectives of the surveys were to determine nesting distribution, density, productivity and population trends. Objectives of the banding program were to determine migration routes, wintering areas, and population dynamics. Other areas with breeding peregrine were surveyed as time and funding allowed. This report summarizes data collected in 1990.

STUDY AREAS

In 1990, approximately 2700 km of rivers in interior and northern Alaska were surveyed. Additionally, approximately 700 km of coastline in western Alaska were surveyed.

In interior Alaska, the areas surveyed were:

1. Charley River: between Copper Creek and the Yukon River (170 km);
2. Porcupine River: between the Alaska-Yukon Territory border and Ft. Yukon (145 km);
3. Tanana River: between Tanacross and Fairbanks (375 km);

4. Yukon R. (upper): between the Alaska-Yukon Territory border and Circle (265 km);
5. Yukon R. (middle): between Stevens Village and Tanana (240 km); and
6. Yukon R. (lower): between Tanana and St. MarYs (970 km).

In northern and western Alaska, the areas surveyed were:

7. Colville River: between the Etivluk River and Ocean Point {335 km);
8. Sagavanirktok R.: between Slope Mountain and the north end of Franklin Buff (175 km).

On the west coast of Alaska, the area from Unalakleet north to Cape Krusenstern was surveyed. Generally, boundaries of survey areas were limited to '.5 km on either side of rivers *or* '.5 km inland from the coast.

METHODS

In the four representative study areas (upper Yukon, upper Tanana, Colville and Sagavanirktok rivers), two ground surveys were made through each area (except on the Sagavanirktok River where only a portion of the area was surveyed). The middle and lower Yukon River and Norton Sound were also surveyed twice in 1990. On first surveys, the number of occupied sites was determined. On second surveys, the number of successful pairs and the number of young were determined and the young were banded. For the remaining areas, only one survey was made to determine the number of successful pairs and the number of young, and to band the young.

All survey data and nest site characteristics were recorded on the Raptor Observation Record Card (Feb. 1989) (Appendix A). Definitions and nesting status terminology y followed that described in the National Wildlife Federation's Raptor Management Techniques Manual (1986) (Appendixes B and C).

RESULTS

Occupancy and Productivity

Results of the 1990 Alaska American and Arctic Peregrine Falcon surveys are presented in Table 1. In interior Alaska (American Peregrine Falcon), 161 pairs, 23 lone adults and 329 young were observed. In northern and western Alaska (Arctic Peregrine Falcon), 108 pairs, 25 lone adults and 214 young were observed.

In the four index study areas, all local populations equalled or exceeded levels once considered historical (pre-DDT). Likewise, in several other areas where surveys have been conducted on a regular basis, populations have equaled or exceeded previous levels. However, in many areas where historical data is available, populations have yet to recover to "historical" levels. Although the

recovery of peregrine falcons *in* Alaska is encouraging, populations in several remote areas have yet to recover.

Banding

In 1990, 424 peregrine falcons were banded in Alaska. Since the Fish and Wildlife Service survey and banding program in Alaska began in 1979, 2893 peregrine falcons have been banded. Between 1952 and 1978, 214 were banded, resulting in a total of 3107 peregrine falcons banded in Alaska (Table 2).

DISCUSSION

The improving status of both the American and Arctic Peregrine Falcon in Alaska warrants review of the classification of both subspecies (endangered and threatened, respectively). The Fish and Wildlife Service annually compares survey results with reclassification criteria in the Alaska Peregrine Falcon Recovery Plan. Additionally, pesticide levels of any eggs collected are compared with Recover y Plan criteria. Although population levels have exceeded Recovery Plan criteria for the past five years, pesticide criteria have yet to be achieved. The Fish and Wildlife Service is conducting a Status Review for both subspecies to determine if reclassification is appropriate.

ACKNOWLEDGMENTS

In 1990, as in previous years, several individuals participated in the surveys. Personnel from the Fish and Wildlife Service, Bureau of Land Management, National Park Service, Alaska Department of Fish and Game, and Alaska Biological Research contributed to the program. The principal investigators for the various areas were as follows: Skip Ambrose (upper Yukon and upper Tanana rivers); Peter Bente (middle and lower Yukon River); Mike Britten (sections of the west coast and north central Alaska); Fran Mauer (Porcupine River); Bob Ritchie (north slope tributaries); Jim Silva (Sagavanirktok River); Ted Swem (Colville River); Steve Ulvi (Charley River); and John Wright and Jeff Hughes (west coast).

LITERATURE CITED

National Wildlife Federation. 1987. Raptor Management Techniques Manual (B.A. Giron Pendleton, B.A. Millsap, K.W. Cline, and D.M. Bird, Eds.). Natl. Wildl. Fed., Washington, D.C. 420 pp.

U.S. Fish and Wildlife Service. 1982. Peregrine Falcon Recovery Plan, Alaska Population. Fish and Wildl. Serv., Anchorage, Ak. 69 pp.

Table 1. Peregrine Falcon Surveys in interior and northern Alaska, 1990.

Area:	Pairs:	Lone adults:	Pairs w/yg:	Young:
Interior Alaska (American Peregrine Falcon):				
Charley River	10	0	7	17
Porcupine River	16	3	14	32
Southern Brooks Range	2	2	0	6
Upper Tanana River	15	3	9	29
Upper Yukon River	35	1	28	73
Middle Yukon River	15	1	13	31
Lower Yukon River	68	13	54	141
Subtotal	161	23	125	329
Northern Alaska and West Coast (Arctic Peregrine Falcon):				
Colville River	51	6	37	103
Sagavanirktok River	10	2	7	19
Norton Sound	24	15	20	50
Kotzebue Sound	3	1	u	u
Central arctic area	20	1	16	42
Subtotal	108	25	80	214
Total	269	48	205	543

Table 2. Peregrine falcons banded in Alaska, 1952-1990.

	Pre-1952	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total:
No. Adult Females:	18	0	0	8	6	19	24	6	5	4	15	15	29	149
No. Adult Males:	0	0	1	5	2	8		1	1	2	3	4	4	31
No. Young:	196	106	148	200	205	237	198	233	271	193	223	326	391	2927
Totals:	214	106	148	209	216	258	230	240	277	199	241	345	424	3107

RAPTOR NEST/EYRIE RECORD CARD (FEB 1989)

TREE NW-SPECIES:

1. LIVE TREE 4. ARTIFICIAL
2. SNAG 5. CAVITY IN TREE
3. NEST BOX/PLATFORM 6. OTHER

TREE HEIGHT (M): E A

TREE DIAMETER (CM): E A

HEIGHT OF NEST IN TREE (M): E A

DOMINANT HABITAT TYPES (up to three within .5 km of nest)
1. CLIFF
2. UNVEGETATED GROUND
3. WET MEADOW
4. DWARF SHRUB MEADOW (tundra dominated by grasses or sedges)
5. GRASS MEADOW
6. DWARF SHRUB MAT (dwarf shrubs < 0.4 M high)
7. LOW SHRUB THICKET (shrubs 0.5 -1.1 M high)
8. MED. SHRUB THICKET (shrubs 1.2.24 M high)
9. TALL SHRUB THICKET (shrubs 2.5 - 5.0 M high)
10. DECIDUOUS FOREST
11. CONIFEROUS FOREST
12. MIXED DECIDUOUS-CONIFER FOREST
13. SCATTERED WOODLAND AND DWARF FOREST
14. ARTIFICIAL 15. OTHER
16. MARINE (dist. km) E A
17. RIPARIAN (dist. km) E A
18. LACUSTRINE(LAKE) (dist. km): E A
19. RIVER / STREAM (dist. km): E A
20. OTHER PERRENIAL WATER (dist. km): E A

FOR CLIFF NESTS - ABOVE CLIFF: (habitat types)
BELOW CUFF:

GROUND NEST - SITUATION:
1. LEDGE ON CLIFF 4. OPEN HILLSIDE
2. STICKNEST ON CLIFF 5. LEVEL GROUND
3. CAVITY (POTHOLE) ON CLIFF & OTHER

CUFF ROCK TYPE: 1. SED 2 IGN 3. MET

SPEC. FORMATION:

CLIFF HEIGHT (M): E A

CLIFF LENGTH (KM): E A

HEIGHT OF NEST ON CLIFF (M): E A

ELEVATION OF NEST ADOVE SEA LEVEL (FT):

ASPECT OF SLOPE:

ASPECT OF NEST:

NEST CONDITION: 1. GOOD 2. POOR 3. REMNANT ONLY

NEST ACCESSIBILITY (to ground predators): 1. EASY 2. MOD. DIFFICULT 3. VERY DIFFICULT

DISTANCE TO HUMAN ACTIVITY (KM): E A

HUMAN ACTIVITY VISIBLE FROM NEST? 1. YES 2. NO

TYPE(S) OF HUMAN ACTIVITY:
1. TRAIL 7. CONSTRUCTION
2. ROAD & RESEARCH
3. BOATING 9. MINING
4. AIRCRAFT 10. OIL / GAS
5. BUILDING(S) 11. LOGGING
6. AGRICULTURE 12. OTHER:

CIRCLE ANY THAT APPLY:
1. PHOTO OF CLIFF TAKEN
2. PHOTO OF EYRIE TAKEN
3. EYRIE DESCRIP. ATTACHED
4. PREY REMAINS COLL.
5. EGG(S) COLLECTED & EGGSHELLS COLLECTED
7. WHITEWASH AT EYRIE
8. OTHER WHITEWASH ON CLIFF
9. OVERHANG AT EYRIE
10. AFTERNOON SHADING?: a. YES b. NO c. UNKNOWN

BANDING AND BAND RECOVERY INFORMATION

AGE	SEX	AVISE NO. - COLOR / LEG	BAND CODE - COLOR / LEG

RAPTOR OBSERVATION RECORD CARD (FEB 1989)

OBSERVER NAME AND ADDRESS:

MAP NAME:

STATE - MAP # - NEST TERR. # - SITE ● . W

SPECIFIC AREA (DESCRIBE):

OTHER NO. (e.g. Agency No.):

UTM-N or LATITUDE:

UTM-E or LONGITUDE:

SPECIES (COM NAME OR AOU ABBREV.):

DATE	TIME	SUR MET	NO. ADS	NO. SUB	No. EGGS	NO. NEST	AGE NEST	NO. FLG	ACTIVITIES
					E? A	E? A	E A		
					E	E A	E A		
					E	E A	E		
					E A	E A	E		
SEASON SUMMARY	TOTAL:								

SURVEY METHOD:
1. FOOT
2. VEHICLE
3. BOAT
4. PLANE
5. HELICOPTER
6. INCIDENTAL OBS.

ACTIVITY / BEHAVIOR (May Be More Than One)
1. PERCHED 7. BODY CARE 13. COPULATING
2. FLYING 8. COURTSHIP 14. OTHER:
3. HUNTING/FORAGING 9. NEST BUILDING
4. FEEDING ADULT 10. INCUBATING
5. TERR. DEFENSE 11. BROODING
6. VOCALIZING 12. FEEDING YOUNG

OFFICIAL NEST STATUS

NOTES, MAP, OR PHOTO ATTACHED? 1. YES 2. NO

REMARKS (Moult In Adult Pair, Prey In Nest/Eyrie, Etc.):

Appendix A. Alaska Raptor Observation and Nest Record Card (Feb. 1989).

Appendix B. Definition of terms.

Alternate Nest:

An unoccupied *nest* site within the nesting territory of one pair of birds.

Breeding Territory:

The area within which courtship, copulation, nesting and food seeking **usually** occur.

Fledged Young:

Young that have reached 80% of their respective fledging age (age of first flight) or more.

Nest Site:

The actual site of the nest or ledge. More than one nest site may be present within the territory of a pair of birds but used in different years.

Nesting Territory:

An area that contains, or historically contained, one or more nests (or scrapes) within the breeding territory of a pair of mated birds, and where no more than one pair has ever bred in any year.

Appendix C. Nesting Territory and Breeding Status Terminology.

1. Unoccupied:

A nesting territory where no bird showing an affinity for the territory during the breeding season was observed (investigators should spend a minimum of 4 hours at the territory during the incubation period to make this determination.

2. Occupancy Unknown:

A nesting territory where no bird showing an affinity for the territory during the breeding season was observed but investigators spent less than 4 hours at the territory during the incubation period.

3. Occupied--Non-breeding:

A nesting territory where one or two birds showing an affinity for the nesting territory during the breeding season were observed but no eggs were laid (note: this category involves proving no eggs were laid, therefore only those nests that were frequently observed can be assigned to this category).

4. Occupied--Breeding:

An occupied nesting territory where eggs were laid (evidence includes young in nest, eggs or eggshells in nest, or adults seen incubating) but where final breeding success was not determined.

5. Occupied--Unsuccessful Breeding:

An occupied nesting territory where breeding was attempted but where no young reached 80% of its fledging age, for any reason (for example, eggs destroyed or otherwise lost, eggs failed to hatch, or young hatched but died prior to fledging).

6. Occupied--Successful Breeding:

An occupied nesting territory where one or more young reached 80% of its fledging age.

7* Occupied--Breeding Status Unknown:

An occupied nesting territory where breeding or non-breeding could not be determined.

Table 1. Peregrine falcon nest site locations in western Alaska.

SITE NO.	SPECIES	LATITUDE	LONGITUDE
NORTON4	PEFA	63.55	161.1125
NORTON5	PEFA	63.99	160.8881
NORTON1	PEFA	63.5403	162.5247
NORTON2	PEFA	63.6306	162.396
NORTON3	PEFA	63.4941	162.0115
NORTON6	PEFA	64.0509	160.9333
NORTON7	PEFA	64.1118	160.9421
NORTON8	PEFA	64.1967	160.9491
NORTON9	PEFA	64.1276	161.3094
NOR TONI O	PEFA	64.4053	161.5011
NORTON11	PEFA	64.381	161.5287
NORTON12	PEFA	64.3986	161.5199
NORTON13	PEFA	64.4174	161.5283
NORTON14	PEFA	64.4327	161.4854
NORTON15	PEFA	64.4408	161.4793
NORTON16	PEFA	64.4497	161.4706
NORTON17	PEFA	64.4809	161.4756
NORTON18	PEFA	64.5057	161.4571
NORTON19	PEFA	64.5246	161.407
NORTON20	PEFA	64.5396	161.0882
NORTON21	PEFA	64.7787	161.3679
SHAKOOA	PEFA	64.4074	160.5847
NORTON22	PEFA	64.5866	162.3536
NORTON23	PEFA	64.5724	162.403
NORTON24	PEFA	64.4939	162.5787
NORTON25	PEFA	64.3654	162.7042
NORTON26	PEFA	64.334	162.7673
NORTON27	PEFA	64.331	162.7925
NORTON28	PEFA	64.364	162.8041
NORTON29	PEFA	64.4347	163.0888
NORTON30	PEFA	64.4012	163.1451
NORTON31	PEFA	64.44.18	163.2299
NORTON32	PEFA	64.4639	163.2487
NORTON33	PEFA	64.5651	163.6073
NORTON34	PEFA	64.5662	163.6713
NORTON35	PEFA	64.5662	163.7213
NORTON36	PEFA	64.5638	163.8903
NORTON37	PEFA	64.5589	163.945
90-057	PEFA	64.7056	164.2014
NORTON38	PEFA	64.4369	165.0051
NORTON39	PEFA	64.488	166.2065
NORTON40	PEFA	65.217	166.473
NORTON41	PEFA	65.2253	166.4735
NORTON42	PEFA	65.2601	166.2552
NORTON43	PEFA	65.3974	167.2556
NORTON44	PEFA	65.4143	167.4554
NORTON45	PEFA	65.4289	167.5044
NORTON46	PEFA	65.5654	168.0163
90-056	PEFA	66.2162	161.8061

Table 1 (cent). Peregrine falcon nest site locations in western Alaska.

SITE NO.	SPECIES	LATITUDE	LONGITUDE
90-063	PEFA	66.302	161.8938
90-064	PEFA	66.0686	162.0438
90-065	PEFA	66.0365	162.2905
90-066	PEFA	66.0995	162.7463
90-001	PEFA	67.9552	161.6872
90-046	PEFA	67.1556	163.5668
90-047	PEFA	67.1378	163.4789
90-048	PEFA	67.5826	163.9441
90-049	PEFA	67.6694	163.8469
90-050	PEFA	67.7324	163.482
90-051	PEFA	67.8559	163.2509
90-052	PEFA	67.9638	164.5554
UTUK67.6	PEFA	68.9595	161.0999
PITM70.4	PEFA	68.8121	164.2832
PITM61.2	PEFA	68.7887	164.1829
90-016	PEFA	68.1231	163.8247
90-017	PEFA	68.1022	164.1472
90-018	PEFA	68.018	164.4029
90-053	PEFA	68.3307	165.7101
90-054	PEFA	68.1353	165.9507
90-055	PEFA	68.1016	165.8013

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ASCII FILE FOR PEREGRINE FALCON NEST SITES IN WESTERN ALASKA

OTHERNUM, SPECIES, LATITUDE, LONGITUDE

"NORTON4","PEFA","63.55000","1 61.1125"
"NORTON5","PE FA","63.99000", "160.8881"
"NORTONI"," PEFA","63.54030"," 162.5247"
"NORTON2" ,"PE FA", "63.63060", "1 62.3960"
"NORTON3","PEFA'","63.4941O"," 162.0115"
"NORTON6","PEFA", "64.05090","160.9333"
"NORTON7","PEFA","64.11180","1 60.9421"
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"NORTON13","PEFA","64.41 740","161.5283"
"NORTON14","PEFA","64.43270","161.4854"
"NORTON15","PEFA","64.44080", "161.4793"
"NORTON16","PEFA" ,"64.44970","161 .4706"
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"NORTON19","PEFA","64.52460","161 .4070"
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"NORTON21","PEFA","64.77870", "161.3679"
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"NORTON29","PEFA", "64.43470","163.0888"'
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"NORTON31","PEFA","64.44180","163.2299"
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"NORTON33","PEFA", "64.5651O","163.6O73'"
"NORTON34",'"PEFA", "64.56620","163.671 3"
"NORTON35","PEFA" ,"6456620","163.721 3"
"NORTON36","PEFA","64.56380", "163.8903"
"NORTON37","PEFA" ,"64.55890'","163.9450"
"90-057","PEFA","64.70560","164.2014"
"NORTON38","PEFA","64.43690", "165.0051"
"NORTON39","PEFA","64.48800", "166.2065"
"NORTON40","PEFA","65.21 700","'166.4730"
"NORTON41","PEFA","65.22530", "166.4735"
"NORTON42","PEFA","65.2601 0","'166.2552"
"NORTON43","PEFA","65.39740", "167.2556"
"NORTON44","PEFA","65.41 430","167.4554"
"NORTON45","PEFA","65.42890", "167.5044"
"NORTON46","PEFA","65.56540", "168.0163"
"90-056","PEFA","66.21 620","161.8061"
"90-063","PEFA","66.30200", "161.8938"

"90-064", "PEFA ", "66.06860", "1 62.0438"
"90-065","PEFA ","66.03650","1 62.2905"
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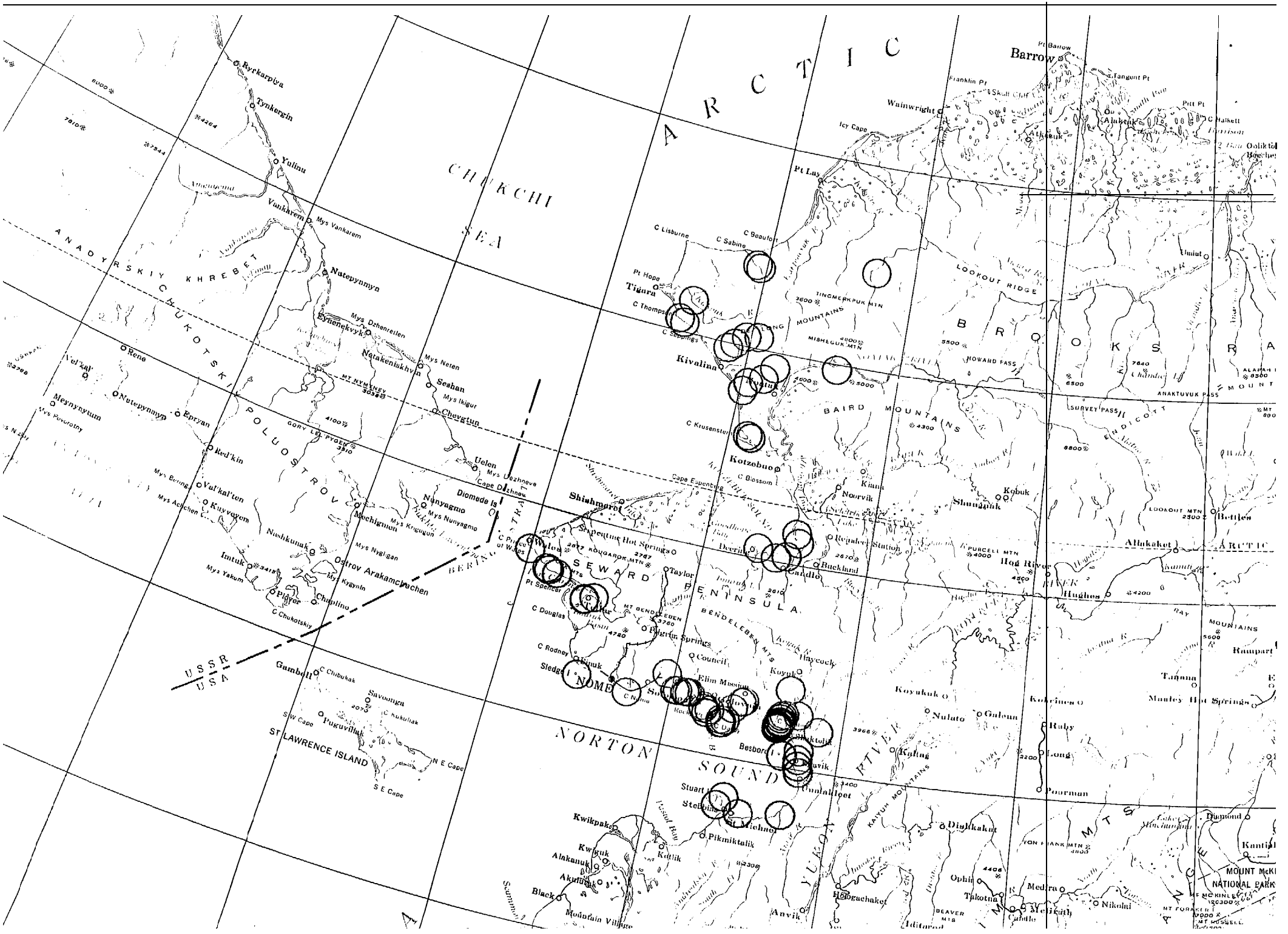
"PITM70.4","PE FA","*68.8121O","1 64.2832"
"PITM61.2","PEFA","68.78870"," 164.1829"
"90-016","PEFA","68.1 2310","163.8247"
"90-017","PEFA","68.10220","164.1472"
"90-018","PEFA","68.01 800","164,4029"
"90-053","PEFA","68.33070","165.7101"
"90-054","PEFA","68.1 3530","165.9507"
"9O-O55","PEFA","68.1O16O","165.8O13"


ARCTIC
CHUKCHI SEA
BERING STRAIT
NORTON SOUND
SEWARD PENINSULA
BROOKS RANGE
ANADYRSKIY KHREBET
CHUKOTSKIY POLUOSTROV
USSR
USA
ST LAWRENCE ISLAND
YUKON
Barrow
Wainwright
Icy Cape
Pt Lay
Tigara
Kivalina
Kotzebue
Shishmaref
Wales
Diomede Is
Nunyagmo
Mechigmen
Uelen
Nutepynmyn
Rene
Meynypylgyno
Epryan
Red'kin
Vel'kal'ten
Kuyvyvem
Imtuk
Nuchkunuk
Ostrov Arakamchechen
Chaplino
Provideniya
Ryrkarpiya
Tynkargin
Yulinu
Vankarem
Mys Vankarem
Nutepynmyn
Mys Dzhentellen
Mys Neten
Seshan
Mys Ikigur
Chevgtun
Mys Uezhnoye
Cape Dezhnev
Mys Nunyagmo
Mys Krugunon
Mys Nyglgan
Mys Kygynin
Mys Yakum
Mys Achichen
Mys Beringa
Mys Poveorotny
Gambell
Savoonga
Pugugvillak
SW Cape
NE Cape
SE Cape
Nome
Council
Teller
Golovin
White Mountain
Elim
Koyuk
Koyuk R
Stuart Creek
Stebbins
Pikmiktalik
Kwikpak
Kwiguk
Alakanuk
Black
Mountain Village
Hazen Bay
Pastol Bay
Kotlik
Besboro I
Unalakleet
Shaktoolik
Nulato
Galena
Kaltag
Ruby
Long
Pourman
Koyukuk
Kokrines
Tanana
Manley Hot Springs
Rampart
Hughes
Allakaket
Bettles
Shungnak
Kobuk
Noorvik
Kiana
Deering
Candle
Buckland
Taylor
Pt Spencer
Pt Spencer Hot Springs
Cape Espenberg
C Blossom
C Krusenstern
C Lisburne
C Beaufort
C Sabine
Pt Hope
C Thompson
C Seppings
Franklin Pt
Skull Cliff
Pt Barrow
Tangent Pt
Pitt Pt
C Halkett
Harrison
Atkasook
Umiat
Ooliktok
Hoochen
Alatna
Chandler L
Survey Pass
Endicott
Anaktuvuk Pass
Howard Pass
Misheguk Mtn
Tingmerkpuk Mtn
Lookout Ridge
Baird Mountains
Purcell Mtn
Lookout Mtn
Hog River
Arctic
Mountains
Kaiyuh Mountains
Yukon Mts
Von Frank Mtn
Mt McKinley
Mt Russell
Mount McKinley National Park
Diamond
Kantishna
Dishkakat
Ophir
Takotna
Medfra
Nikolai
McGrath
Beaver
Cahtle
Anvik
Hologachaket
Editarod
Nutato
Galeun
Kaltag
Ruby
Long
Pourman
Koyukuk
Kokrines
Tanana
Manley Hot Springs
Rampart
Hughes
Allakaket
Bettles
Shungnak
Kobuk
Noorvik
Kiana
Deering
Candle
Buckland
Taylor
Pt Spencer
Pt Spencer Hot Springs
Cape Espenberg
C Blossom
C Krusenstern
C Lisburne
C Beaufort
C Sabine
Pt Hope
C Thompson
C Seppings
Franklin Pt
Skull Cliff
Pt Barrow
Tangent Pt
Pitt Pt
C Halkett
Harrison
Atkasook
Umiat
Ooliktok
Hoochen
Alatna
Chandler L
Survey Pass
Endicott
Anaktuvuk Pass
Howard Pass
Misheguk Mtn
Tingmerkpuk Mtn
Lookout Ridge
Baird Mountains
Purcell Mtn
Lookout Mtn
Hog River
Arctic
Mountains
Kaiyuh Mountains
Yukon Mts
Von Frank Mtn
Mt McKinley
Mt Russell
Mount McKinley National Park
Diamond
Kantishna
Dishkakat
Ophir
Takotna
Medfra
Nikolai
McGrath
Beaver
Cahtle
Anvik
Hologachaket
Editarod